DOCUMENT RESUME

ED 164 011 IR 006 830

AUTHOR	Hitchens, Howard
TITLE	Educational Television in the United States.
PUB DATE	11 Oct 78
NOTE	24p.; Paper presented at the 1 Convencion Internacional de TV y Educacion (Barcelona, Spain, October 11, 1978)
EDRS PRICE	MF-$0.83 HC-$1.67 Plus Postage.
DESCRIPTORS	Broadcast Television; *Childrens Television; Closed Circuit Television; Communication Satellites; Cost Effectiveness; *Educational History; *Educational Television; Elementary Secondary Education; *Instructional Media; Postsecondary Education; Programing (Broadcast); State of the Art Reviews; Surveys

ABSTRACT

Major developments in the history of education and television centered around broadcasting in the 1950's, then closed circuit applications, the growth of video recording, and more recently the use of satellites. During its 25 year history, educational television in the U.S. has seen the growth of a television college in Chicago, a video university (the University of Mid-America) in Nebraska and the mid-west, the Children's Television Workshop programs for pre-school education (Sesame Street) and for reading improvement (The Electric Company). The results of a major survey of instructional television uses throughout the United States by the Corporation for Public Broadcasting indicate that television is firmly established in the formal education system of the country. Television's effectiveness for many applications in the educational system in the United States has assured it a firm place in instructional programming at the elementary, secondary, and post-secondary levels. TV applications currently include several county wide systems, and a brief description of the Broward County, Florida, and Washington County, Maryland, systems concludes the presentation. (JEG)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED164011

U.S. DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
NATIONAL INSTITUTE OF
EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

EDUCATIONAL TELEVISION IN THE UNITED STATES

by

Howard Hitchens

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

Howard Hitchens

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC) AND USERS OF THE ERIC SYSTEM."

IR006830

092078

EDUCATIONAL TELEVISION IN THE UNITED STATES

Dr. Howard Hitchens
Executive Director
Association for Educational Communications
and Technology
1 Convencion Internacional De TV
y Educacion
Barcelona - 11 October 1978

AUDIO VIDEO

I AMENITIES

II INTRODUCTION

THE STORY OF EDUCATIONAL TELEVISION IN THE UNITED STATES STARTS IN 1952 WHEN THE U.S. FEDERAL COMMUNICATION COMMISSION ALLOCATED THE TELEVISION BROADCAST FREQUENCIES. THERE WERE ONLY A LITTLE MORE THAN ONE HUNDRED COMMERCIAL VHF TV STATIONS AT THAT TIME, AND ABOUT 15 MILLION HOMES WITH TELEVISION. SINCE THEN, TELEVISION HAS GROWN TO BE THE MOST PERVASIVE COMMUNICATION MEDIUM IN U.S. HISTORY, AND PROBABLY THE HISTORY OF THE WORLD. TODAY IN THE UNITED STATES THERE ARE APPROXIMATELY 720 COMMERCIAL TELEVISION STATIONS AND 269 PUBLIC (OR EDUCATIONAL) TELEVISION BROADCAST STATIONS. TELEVISION SIGNALS ARE RECEIVED IN MORE THAN 73 MILLION HOMES.

TODAY 98 PERCENT OF THE HOMES IN THE UNITED STATES HAVE AT LEAST ONE TELEVISION SET AND NEARLY HALF OF THE HOMES HAVE TWO TELEVISION SETS. INCIDENTALLY, MORE THAN THREE-FOURTHS OF THE HOMES ARE ABLE TO RECEIVE COLOR TELEVISION.

THE GROWTH OF TELEVISION FOR EDUCATION HAS PARALLELED THE GROWTH OF TELEVISION THROUGHOUT THE UNITED STATES. HAS THE USE OF TELEVISION FOR EDUCATION MADE A SIGNIFICANT DIFFERENCE IN THE WAY IN WHICH EDUCATION IS CONDUCTED IN THE UNITED STATES? WHAT IS THE GENERAL EFFECT OF TELEVISION ON THE AMERICAN EDUCATION SYSTEM? IN ATTEMPTING TO ANSWER THOSE TWO QUESTIONS TODAY, I WILL;

1. TRACE THE COURSE OF DEVELOPMENT OF TELEVISION FOR EDUCATION SINCE THE EARLY 1950'S,
2. DESCRIBE THE GENERAL EFFECTS AND USES IN FORMAL EDUCATION IN THE UNITED STATES OF EDUCATIONAL TELEVISION, AND
3. GIVE YOU EXAMPLES OF HOW TELEVISION IS CURRENTLY PROGRAMMED AND USED FOR EDUCATION, WITH PARTICULAR ATTENTION TO ONE COUNTY IN THE UNITED STATES.

3/

III A BRIEF HISTORY OF ETV DEVELOPMENTS

A. BROADCASTING

THE CURRENT 269 PUBLIC BROADCASTING STATIONS IN THE UNITED STATES DO AN ADEQUATE JOB OF MAKING A BROADCAST EDUCATIONAL PROGRAM AVAILABLE IN ALMOST EVERY COMMUNITY IN THE COUNTRY. NEARLY ALL OF THE PUBLIC BROADCASTING STATIONS PROVIDE SOME EDUCATIONAL PROGRAMMING DIRECTLY TO THE FORMAL SCHOOLS AND COLLEGES.

B. CLOSED-CIRCUIT

TWO OTHER METHODS OF PROVIDING TELEVISION PROGRAMMING HAVE GROWN DURING THIS SAME QUARTER CENTURY TO BE GREATLY RELIED ON AS A MEANS OF RECEIVING TELEVISION PROGRAMMING; ONE OF THESE IS CABLE TELEVISION, BY WHICH SIGNALS ARE NOT BROADCAST BUT ARE ROUTED THROUGH "LAND LINES" TO THE SCHOOLS FROM THE POINTS OF PRODUCTION, AND INSTRUCTIONAL TELEVISION FIXED SERVICE (ITFS) WHICH IS A FORM OF MICROWAVE TRANSMISSION WHICH IS HIGHLY DIRECTIONAL, ALLOWING THE SIGNAL TO BE CONTROLLED SO THAT IT IS NOT RADIATED GENERALLY THROUGHOUT THE COMMUNITY BUT IS SENT IN NEARLY THE SAME DISCRETE FASHION AS THROUGH THE CABLE.

CABLE TELEVISION WAS ORIGINALLY DEVELOPED TO PROVIDE GOOD TV RECEPTION TO THOSE VIEWERS WHO WERE UNABLE TO GET CLEAR PICTURES FROM TELEVISION STATIONS IN THEIR IMMEDIATE VICINITY, BECAUSE OF GEOGRAPHIC FEATURES THAT INTERFERED WITH OR BLOCKED TV SIGNALS. CABLE TV HAS GROWN AND CHANGED SIGNIFICANTLY IN THE LAST TWENTY YEARS. TODAY CABLE TV IS SERVING ABOUT 17 PERCENT OF THE HOUSEHOLDS OF THE UNITED STATES, OR 13 MILLION HOMES WITH TELEVISION. IN ALMOST EVERY CABLE SYSTEM THERE IS THE ABILITY FOR, AND SOME REGULAR USE OF, THE TRANSMISSION OF CABLE SIGNALS WITH EDUCATIONAL PROGRAMMING.

THERE ARE BETWEEN 700 AND 1,000 CLOSED-CIRCUIT EDUCATIONAL TELEVISION SYSTEMS OPERATING IN EDUCATIONAL INSTITUTIONS. THEY RANGE IN SIZE FROM A SIMPLE CAMERA, RECORDER AND MONITOR IN A SINGLE SCHOOL ROOM, TO A COUNTY-WIDE SYSTEM SUCH AS I WILL DESCRIBE LATER IN WASHINGTON COUNTY, MARYLAND.

THE INSTRUCTIONAL TELEVISION FIXED SERVICE (ITFS) SYSTEMS ARE NOT AS WIDELY USED FOR EDUCATION BUT THEY ARE SERVING VERY WELL IN THOSE PLACES WHERE THEY ARE USED. CURRENTLY THERE ARE 500 CHANNELS OF ITFS IN OPERATION BY 99 LICENSEES. THESE CHANNELS ARE ALLOCATED BY THE FEDERAL REGULATORY AGENCY - THE FEDERAL COMMUNICATIONS COMMISSION.

5/

C. VIDEO RECORDING

THE VIDEO RECORDER ARRIVED ON THE SCENE IN THE EARLY 1960'S, AND HAS MADE MAJOR CONTRIBUTIONS TO OUR ABILITY TO USE TELEVISION FOR EDUCATION. THE FIRST VIDEO RECORDERS WERE REEL-TO-REEL MACHINES; AND COMPATIBILITY FROM MACHINE TO MACHINE WAS A SERIOUS PROBLEM. WITH THE INTRODUCTION OF THE THREE-QUARTER INCH VIDEOCASSETTE ABOUT A DECADE AGO, THE COMPATIBILITY PROBLEM BEGAN TO DISAPPEAR AND MORE AND MORE INSTRUCTIONAL PROGRAMMING BECAME AVAILABLE AS A VIDEO RECORDING. THE VIDEOCASSETTE RECORDER IS BECOMING MORE COMMON EVERY DAY IN THE UNITED STATES. IT IS ESTIMATED THAT APPROXIMATELY 750,000 VIDEOCASSETTE RECORDERS WILL BE SOLD THERE IN 1978. MOST OF THESE ARE BEING SOLD TO INDIVIDUAL HOMEOWNERS FOR USE IN THE PRIVACY OF THEIR HOME, BUT A GREAT NUMBER ARE FINDING THEIR WAY INTO THE SCHOOLS AND COLLEGES OF THE UNITED STATES.

D. SATELLITE AND VIDEODISCS

CURRENTLY THE FIXED ORBITAL SATELLITES WHICH HAVE BEEN DEVELOPED BY THE NATIONAL AERONAUTICS AND SPACE ADMINISTRATION ARE BEING USED FOR EDUCATIONAL AND PUBLIC SERVICE PURPOSES. THERE

6/

ARE SEVERAL PROJECTS WHICH ARE SATELLITES, RANGING FROM SERVING THE MEDICAL NEEDS OF OUR ESKIMOS IN THE ARCTIC REGION OF ALASKA AND THE CITIZENS OF REMOTE ISLANDS IN THE PACIFIC, INCLUDING SAMOA; TO THE PROVIDING OF DIRECT READING AND LANGUAGE INSTRUCTION TO SCHOOL CHILDREN IN THE APPALACHIAN MOUNTAIN REGIONS OF THE EASTERN UNITED STATES. THE SATELLITES OFFER THE OPPORTUNITY TO SHARE EDUCATIONAL PROGRAMMING AMONG NATIONS.

OF COURSE, THE ADVANCING TECHNOLOGY OF RECORDING TELEVISION SIGNALS IS GIVING US THE VIDEODISC, WHICH PROMISES TO BE AN EFFICIENT AND COST EFFECTIVE MEANS OF PROVIDING RELATIVELY INEXPENSIVE EDUCATIONAL PROGRAMMING WHEREEVER A TELEVISION RECEIVER CAN HAVE ADDED TO IT A SIMPLE VIDEODISC PLAYER. THIS IS THE NEWEST DEVELOPMENT IN THE FIELD OF VIDEO-RECORDING AND HOLDS GREAT PROMISE FOR EDUCATION. THE DEVICE IS BEING RELEASED FOR SALE THIS MONTH IN THE UNITED STATES BY MCA, WITH THEIR DISCOVISION FOR USE IN THE HOME.

E. APPLICATIONS AND UTILIZATION

1. THE CHICAGO TELEVISION COLLEGE IS ONE OF THE MOST UNUSUAL AND OLDEST DEVELOPMENTS EMPLOYING THE OPEN LEARNING CONCEPT. APPROXIMATELY TWENTY

7/

YEARS AGO, THE CHICAGO CITY JUNIOR COLLEGE BEGAN PROVIDING EDUCATIONAL PROGRAMMING ON VHF CHANNEL 11, WTTW, THUS ALLOWING STUDENTS TO STUDY AND LEARN AT HOME AND ENROLL IN COURSES BY MAIL. THEY ARE THEN TESTED PERIODICALLY AT LOCATIONS THROUGHOUT THE COMMUNITY AND GIVEN CREDIT UPON SATISFACTORILY COMPLETING THE TESTS. THAT SYSTEM IS STILL OPERATING IN CHICAGO; AND HAS RECENTLY ADDED THE DISTRIBUTION OF ADULT EDUCATION COURSES BY USING A LARGE CLOSED-CIRCUIT TV SYSTEM IN THE CHICAGO AREA. INCIDENTALLY, IT PREDATES THE BRITISH OPEN UNIVERSITY.

2. THE TEN YEAR OLD UNIVERSITY OF MID-AMERICA (UMA) IS A PROJECT WHICH INVOLVES SEVEN STATES IN THE MIDDLE OF THE AMERICAN CONTINENT WHO COOPERATE TO BROADCAST JOINTLY-PRODUCED INSTRUCTIONAL PROGRAMMING INTO THE HOMES OF THE CITIZENS. THIS INFORMATION IS IN THE FORM OF INSTRUCTIONAL COURSES AND IS AVAILABLE FOR CREDIT THROUGH ELEVEN UNIVERSITIES IN THOSE STATES. TESTING IS ACCOMPLISHED AT REGIONAL CENTERS WHICH ARE CONVENIENTLY LOCATED THROUGHOUT THE GEOGRAPHIC AREAS WHERE THE SIGNALS ARE RECEIVED. THE SIGNALS ARE BROADCAST BY EDUCATIONAL TELEVISION STATIONS.

8/

3. OF COURSE YOU ARE PROBABLY ALL FAMILIAR WITH THE TWO SERIES OF THE CHILDREN'S TELEVISION WORKSHOP IN THE UNITED STATES, SESAME STREET AND THE ELECTRIC COMPANY. THOSE TWO SERIES LITERALLY REVOLUTIONIZED THE WAY IN WHICH AMERICANS VIEW BROADCAST TELEVISION, AND ITS EMPLOYMENT FOR EDUCATION. AS YOU KNOW, SESAME STREET WAS DEVISED FOR PRE-SCHOOL CHILDREN TO IMPROVE THEIR GENERAL LITERACY APTITUDE. THE ELECTRIC COMPANY WAS AIMED AT THE OLDER CHILD AND WAS INTENDED TO TEACH BASIC READING SKILLS.

4. A RECENT MAJOR STUDY OF THE USE OF INSTRUCTIONAL TELEVISION IN THE ELEMENTARY AND SECONDARY SCHOOLS OF THE UNITED STATES DISCLOSED THAT TELEVISION PROGRAMMING IS AVAILABLE TO MORE THAN ONE AND ONE-HALF MILLION OF THE ESTIMATED THREE MILLION ELEMENTARY AND SECONDARY SCHOOL TEACHERS IN THE UNITED STATES. APPROXIMATELY THIRTY PERCENT (726,000) OF THOSE TEACHERS USE INSTRUCTIONAL TELEVISION PROGRAMS REGULARLY. APPROXIMATELY THIRTY-GIVE PERCENT OF THE STUDENTS IN THE ELEMENTARY AND SECONDARY SCHOOLS VIEW ITV REGULARLY. APPROXIMATELY THIRTY PERCENT OF ALL EDUCATORS, ADMINISTRATORS AS WELL AS TEACHERS, HAVE HAD TRAINING IN THE USE OF INSTRUCTIONAL TELEVISION.

THE SURVEY FURTHER DISCLOSED THAT MORE THAN FIFTY PERCENT OF ALL THE EDUCATORS IN THE UNITED STATES HAVE POISITIVE ATTITUDES TOWARD INSTRUCTIONAL TELEVISION. ONE MAJOR FINDING WAS THAT BROADCAST SCHEDULES ARE A MAJOR HINDRANCE IN TEACHERS' USE OF TELEVISION. THIS, UNDOUBTEDLY, HAS LED TO THE DEVELOPMENT OF SUCH ALTERNATIVE WAYS OF PROVIDING TV PROGRAMS AS OFF-THE-AIR RECORDING FOR MORE CONVENIENT USE, AND PROVIDING THE PROGRAM IN VIDEOTAPE FORMAT AT THE OUTSET.

WHAT DO THESE LARGE NUMBERS MEAN? PRIMARILY, THEY REENFORCE MY EARLIER STATEMENT THAT TELEVISION IS INDEED THE MOST PERVASIVE COMMUNICATION MEDIUM IN AMERICAN SOCIETY; AND IT IS USED VERY MUCH IN AMERICAN EDUCATION. IT IS REGULARLY VIEWED BY ABOUT 15 MILLION CHILDREN, ONE OUT OF EVERY THREE SCHOOL AGE CHILDREN IN THE UNITED STATES.

THERE IS SUCH A VARIETY OF USES OF TELEVISION IN THE CLASSROOM THAT IT IS VERY DIFFICULT TO DESCRIBE THEM IN A FEW SENTENCES.

WHAT ARE SOME USES WHICH ARE MADE OF TELEVISION IN AMERICAN ELEMENTARY AND SECONDARY EDUCATION?

THE PREFERRED USES, AS INDICATED BY THE RESPONSES TO THAT MAJOR SURVEY WHICH I JUST MENTIONED CONCERNING INSTRUCTIONAL TELEVISION, ARE:

1. TO EXTEND THE RANGE OF EXPERIENCES AVAILABLE TO STUDENTS,
2. TO PERMIT INDIVIDUALIZATION OF INSTRUCTION,
3. TO PRESENT SUBJECT MATTER WHERE THERE IS NOT A SPECIAL TEACHER (E.G., MUSIC, FOREIGN LANGUAGE),
4. TO SERVE AS A SUITABLE TEACHING ALTERNATIVE IN EMERGENCY SITUATIONS (E.G., SCHOOL CLOSINGS, LONG TERM TEACHER ABSENCES).

THERE ARE MANY OTHER USES THAT HAVE BEEN MADE OF TV IN AMERICAN EDUCATION IN THE LAST TWENTY FIVE YEARS.

HERE ARE SOME RECORDED EXCERPTS FROM INSTRUCTIONAL PROGRAMS ON VIDEOTAPE. THE FIRST IS AN EXCERPT FROM TYPEWRITER INSTRUCTION — (PLAY EXCERPT).

THE SECOND IS AN EXCERPT FROM A PROGRAM WHICH TEACHES SHORTHAND WRITING COMPETENCIES — (PLAY EXCERPT).

HERE IS AN EXCERPT FROM A MUSIC PROGRAM — (PLAY EXCERPT).

THE PARTICULARLY APPROPRIATE USES OF BROADCAST TELEVISION WHICH WERE LISTED BY THE COMMITTEE OF THE BRITISH OPEN UNIVERSITY ARE, I THINK, A VERY USEFUL LIST, AND IT DOES ACCURATELY REFLECT THE AMERICAN EXPERIENCE WITH TV FOR EDUCATION. I HAVE HAD IT TRANSLATED AND MADE AVAILABLE FOR EACH OF YOU AND YOU MAY WISH TO REFER TO IT AFTER I HAVE FINISHED. IT LISTS TWENTY-FOUR PARTICULAR APPROPRIATE USES OF BROADCAST TELEVISION.

THERE ARE, OF COURSE, A MULTITUDE OF SPECIFIC USES MADE OF TELEVISION IN AMERICAN SCHOOLS. IN THE TEACHER TRAINING AREA WE HAVE USED THE VIDEO-RECORDER TO RECORD SHORT INSTANCES OF TEACHING BY STUDENT TEACHERS AND PLAYED IT BACK FOR THEM, AS A MEANS OF SELF-CRITIQUE SO THEY CAN IMPROVE THEIR PERFORMANCE. THIS WE HAVE LABELED MICROTEACHING. IN ADDITION, THERE ARE ALL SORTS OF SPECIFIC APPLICATIONS OF TELEVISION RECORDING APPARATUS FOR

DEMONSTRATIONS, SUCH AS RECORDING SPORTS ACTIVITIES (GYMNASTICS, TENNIS, GOLF, ETC.), PUBLIC SPEAKING, AND OTHER PERSONAL COMPETENCIES.

5. ONE OF THE MORE RECENT DEVELOPMENTS IN U.S. EDUCATION IS THE USE OF COMMERCIALLY BROADCAST ENTERTAINMENT PROGRAMS AS A PART OF THE CURRICULUM. IN PHILADELPHIA A PROFESSOR OBTAINED COPIES OF THE PRINTED SCRIPT OF A DRAMATIC TELEVISION PROGRAM BEFORE IT WAS BROADCAST AND STUDIED THE SCRIPT WITH THE STUDENTS PRIOR TO THEIR VIEWING THE PROGRAM. THIS ENABLED THE STUDENTS TO IMPROVE THEIR LANGUAGE ABILITY AND READING ABILITY SIGNIFICANTLY. THE PROJECT IS CONTINUING.

THERE ARE MANY OTHER SOURCES OF ASSISTANCE FOR TEACHERS TO USE THE BROADCAST ENTERTAINMENT PROGRAMS FROM THE COMMERCIAL NETWORKS IN THE UNITED STATES. THE OLDEST GUIDE TO ASSIST TEACHERS IN ALERTING THEIR STUDENTS TO UPCOMING PROGRAMS IS CALLED TEACHERS GUIDES TO TELEVISION. ANOTHER ONE IS CALLED PRIME TIME AND THERE ARE MANY MORE. THESE SERVICES PROVIDE A SUMMARY OF THE BROADCAST PROGRAM AND SUGGESTIONS FOR THE TEACHER TO HELP HIM USE THE PROGRAM IN HIS TEACHING. EDUCATORS IN THE UNITED STATES HAVE COME TO BELIEVE THAT, SINCE TELEVISION IS SO PERVASIVE, WE MUST MAKE USE OF IT IN FORMAL EDUCATION.

IV EFFECTIVENESS OF EDUCATIONAL TELEVISION

THE ASSESSMENTS OF COST AND GENERAL EFFECTIVENESS OF EDUCATIONAL TELEVISION FOR USE IN THE ELEMENTARY AND SECONDARY SCHOOLS HAVE BEEN GOING ON EVERY SINCE WE BEGAN APPLYING IT IN EDUCATION. THE EVALUATION OF THE POPULAR AMERICAN PROGRAM, SESAME STREET, LEAD US TO A CLEAR INDICATION THAT IT ACCOMPLISHED ITS GOAL OF INCREASING THE FACILITY OF PRE-SCHOOL CHILDREN WITH READING AND NUMBERS, AND THAT THEIR IMPROVEMENT IS A FUNCTION OF THE AMOUNT OF VIEWING BEFORE THEY ENTERED SCHOOL.

IS THERE A BEST MEDIUM FOR INSTRUCTION, AND IS TELEVISION THAT MEDIUM? THE EVIDENCE JUST IS NOT IN YET. IN THE PUBLICATION ENTITLED THE CONDITIONS OF LEARNING, ROBERT GAGNE SAYS - "NO SINGLE MEDIUM IS LIKELY TO HAVE PROPERTIES THAT MAKE IT BEST FOR ALL PURPOSES". THIS IS NOT TO SAY THAT TELEVISION, IN A GIVEN SET OF CIRCUMSTANCES, WOULD NOT BE THE PRIMARY AND MOST USEFUL MEDIUM TO USE FOR INSTRUCTION; BUT IT IS TO SAY THAT TELEVISION IS NOT THE ONLY MEDIUM TO BE USED FOR INSTRUCTION". WILBUR SCHRAMM PUT IT THIS WAY "..... THERE IS NO SUCH THING AS A SUPER MEDIUM...." "TELEVISION CAN PROBABLY PERFORM MORE LEARNING ACTS, WITH GREATER

LIVENESS, THAN ANY OTHER CHANNEL OF INSTRUCTION EXCEPT THE TEACHER."

CAN EDUCATIONAL TV BE COST EFFECTIVE? THE ANSWER IS YES. WHILE WE DO NOT YET HAVE A GREAT AMOUNT OF GENERALIZABLE DATA, ONE RECENT COST ANALYSIS IS VERY INTERESTING. IN 1976, THE AGENCY FOR INSTRUCTIONAL TELEVISION DID A COST COMPARISON ON USES OF ONE OF ITS PROGRAMS ENTITLED INSIDE/OUT, A TEXTBOOK, EDUCATIONAL FILM, AND CLASSROOM TEACHER. THE BREAKDOWN WORKED OUT THIS WAY:

MODE	COST PER STUDENT HOUR OF INSTRUCTION
INSIDE/OUT	$ 00.008
TEXTBOOK	00.014
EDUCATIONAL FILM (16 MM)	
OWNED	00.072
RENTED	00.200
CLASSROOM TEACHER	00.290

WHAT IS VITAL FOR THE COST-CONCERNED ELSEWHERE IS HOW AIT ARRIVED AT THOSE FIGURES. TAKE JUST TWO PARTS OF THE AIT FIGURING:

A. INSIDE/OUT (30 FIFTEEN-MINUTE SHOWS, OR 7.5 HOURS)

(1) SERIES COST	$ 779,000*
(2) TOTAL STUDENT AUDIENCE: 3,125,000 x 5 YEARS, OR 15,625,000	15,625,000**
(3) SERIES COST PER STUDENT:	00.050
(4) COST PER STUDENT HOUR:	00.0067

(con't....)

15/

MODE	COST PER STUDENT HOUR OF INSTRUCTION
(5) TEACHER MANUAL COST PER STUDENT HOUR (MANUAL AT $1.50 SERVES 150 STUDENTS AT ONE CENT EACH)	00.0013
(6) COST PER STUDENT HOUR	00.008

B. CLASSROOM TEACHER:

ASSUME AN AVERAGE ANNUAL SALARY OF $11,000 FOR 180 DAYS, OR 1,260 HOURS OF TEACHING 30 STUDENTS FOR A TOTAL OF 37,800 STUDENT HOURS TAUGHT:

COST PER STUDENT HOUR: $ 00.290

* INCLUDES DESIGN, DEVELOPMENT, PRODUCTION TEACHER GUIDES AND SOME PROMOTION. DOES NOT INCLUDE LOCAL TRANSMISSION OR FILM COPIES.

** THIS ESTIMATE WAS BASED MAINLY ON AIT'S DATA ON TEACHERS GUIDE USE OVER THE FIRST TWO YEARS OF THE SERIES' DISTRIBUTION.

V AN EXAMPLE

LET ME TURN NOW TO A DESCRIPTION OF THE WAY EDUCATIONAL TV OPERATES IN TWO LARGE SCHOOL DISTRICTS IN THE UNITED STATES.

BROWARD COUNTY, FLORIDA - BROWARD COUNTY HAS A VERY ELABORATE COUNTY-WIDE ITFS SYSTEM WHICH PROVIDES FOUR CHANNELS OF TELEVISION BROADCAST BY HIGHLY DIRECTIONAL MICROWAVE TO EVERY ONE OF THE 147 SCHOOLS

IN THE COUNTY. TEACHERS CAN USE TV IN THEIR CLASS-ROOMS IN ONE OF FOUR WAYS:

1. PICKING UP OFF-THE-AIR DIRECT TELECASTS. EACH PROGRAM IS OFFERED FOUR TIMES EACH WEEK ON A SCHEDULE.
2. MAKING A CALL-IN REQUEST "YOU ASKED FOR IT", FOR OVER-THE-AIR PLAY.
3. GETTING A PROGRAM DUBBED ONTO A SCHOOL'S OWN TAPE FOR USE ANYTIME ON THE SCHOOL'S OWN VIDEOTAPE PLAYER. (SOME SCHOOLS HAVE 3/4-IN. CASSETTES; OTHERS HAVE 1/2-IN. CARTRIDGES, FOR A TOTAL OF 79. THIS NUMBER IS INCREASING AS SCHOOLS BUY MORE FOR THEIR OWN EXCLUSIVE USE.)
4. BORROWING A TAPE FROM THE INSTRUCTIONAL TELEVISION CENTER LOANER LIBRARY FOR FIVE DAYS USE. (A CASSETTE PLAYER AND MONITOR CAN BE BORROWED TOO.)

THE INSTRUCTIONAL TELEVISION CENTER OF BROWARD COUNTY PROVIDES A MONTHLY PROGRAM GUIDE WITH AS MANY AS EIGHTY PROGRAMS AVAILABLE DURING ANY PARTICULAR MONTH. THESE PROGRAMS RANGE FROM IN-SERVICE COURSES FOR TEACHERS TO SPECIFIC PROGRAMS, SUCH AS <u>MAGIC VOCABULARY</u> FOR THIRD GRADERS AND <u>MAGIC MATH</u> FOR FIFTH AND SIXTH GRADERS. THE MORE THAN THREE THOUSAND

17/

TELEVISION RECEIVERS IN CLASSROOMS IN THAT COUNTY INSURE THAT A GREAT DEAL OF USE IS MADE OF TELEVISION THERE.

HAGERSTOWN, MARYLAND - THE HAGERSTOWN INSTRUCTIONAL TELEVISION PROJECT IN WASHINGTON COUNTY, MARYLAND, HAS BEEN BROADCASTING INSTRUCTION TO SCHOOLS SINCE 1956 AND IS PROBABLY THE LONGEST CONTINUOUSLY RUNNING ITV PROJECT IN THE WORLD. THE SYSTEM HAS BEEN SERVICING ALL STUDENTS IN WASHINGTON COUNTY SINCE 1959. IN 1972, 22 THOUSAND STUDENTS WERE ENROLLED IN ALL TWELVE GRADES IN THE SCHOOL SYSTEM AND 1440 HOURS OF PROGRAMMING WERE SCHEDULED. THE AVERAGE STUDENT IN 1972 RECEIVED APPROXIMATELY 117 HOURS OF INSTRUCTION VIA TELEVISION (A LITTLE MORE THAN 9 PERCENT OF HIS TOTAL INSTRUCTIONAL TIME WAS SPENT WITH TELEVISION).

TODAY A MAJOR REORGANIZATION OF THE WAY IN WHICH TELEVISION IS USED THROUGHOUT WASHINGTON COUNTY IS TAKING PLACE. BEGINNING IN 1976, THE COUNTY ENTERED A FIVE YEAR PERIOD IN WHICH THE NUMBER OF CABLES TO THE SCHOOLS IS BEING REDUCED IN FAVOR OF USING VIDEOCASSETTES AND PLAYBACK MACHINES FOR THE CLASSROOMS. THE VIDEOCASSETTES ARE DELIVERED TO THE OUTLYING SCHOOLS FROM THE INSTRUCTIONAL RESOURCES CENTER IN HAGERSTOWN ON A SCHEDULE BY

VAN. THIS REPLACES THE CABLE TO MORE THAN HALF OF THE 47 SCHOOLS IN THE COUNTY.

TO GIVE YOU A NOTION OF THE SIZE AND EXTENT OF THIS OPERATION, HERE ARE SOME STATISTICS: THERE ARE CURRENTLY 1,350 TEACHERS IN THE COUNTY; 20,300 STUDENTS; MORE THAN 1,000 TV RECEIVERS; BETWEEN 50 AND 100 VIDEOTAPE RECORD PLAYBACK UNITS; 7 FULL-TIME TV TEACHERS; 4 TV DIRECTORS; AN ENGINEERING STAFF OF 14 WHO SERVE TV DIRECTLY.

IN A RECENT YEAR THE SYSTEM TELECAST 12 PROGRAM SERIES FOR THE MIDDLE AND SECONDARY SCHOOLS, EACH OF WHICH HAD AN AVERAGE OF 36 PROGRAMS PER SERIES, AND EACH WAS TRANSMITTED AN AVERAGE OF 3 TIMES. SINCE THE AVERAGE PROGRAM LASTS APPROXIMATELY 30 MINUTES, SECONDARY SCHOOL TRANSMISSIONS TOTALED ABOUT 900 CONTINUOUS HOURS FOR THE WHOLE SCHOOL YEAR. THE KIND OF PROGRAMMING PROVIDED IS CATEGORIZED THREE WAYS. FIRST, THERE ARE CORE PROGRAMS: SUCH PROGRAMS AS ART AND MUSIC FOR THE ELEMENTARY SCHOOL, WHICH COULD NOT BE PROVIDED ANY OTHER WAY THAN WITH EDUCATIONAL TELEVISION BECAUSE OF THE LACK OF TEACHERS FOR THOSE SUBJECTS.

SECONDLY, THERE IS SUPPORTIVE PROGRAMS, WHICH MEANS THOSE PROGRAMS WHICH WOULD NOT NORMALLY BE AVAILABLE TO TEACHERS IN THE CLASSROOM. THE THIRD CATEGORY IS ENRICHMENT PROGRAMMING - PROGRAMMING THAT IS AVAILABLE TO ENHANCE SUBJECT MATTER WHICH IS ALREADY ADEQUATELY BEING TAUGHT BY TEACHERS IN THE CLASSROOM.

HOW THEN MAY TEACHERS AND STUDENTS RECEIVE TELEVISION PROGRAMMING IN THE CLASSROOM OF WASHINGTON COUNTY, MARYLAND?

1. THE PROGRAM MAY BE RECEIVED DIRECTLY FROM THE INSTRUCTIONAL RESOURCES CENTER (IRC) IN HAGERSTOWN BY CABLE.
2. IF THE SCHOOL BUILDING AND CLASSROOMS ARE NO LONGER LINKED BY CABLE TO THE CENTRAL STUDIOS IN HAGERSTOWN, THE SIGNAL CAN BE RECEIVED AS A BROADCAST SIGNAL, AS A PART OF THE STATE EDUCATIONAL BROADCASTING NETWORK.
3. PROGRAMMING CAN BE RECEIVED IN THE FORM OF VIDEOTAPE RECORDINGS DELIVERED ON SCHEDULE FROM THE IRC IN HAGERSTOWN.

WHAT HAS BEEN THE MAJOR EFFECT OF THE INTRODUCTION OF TELEVISION INTO THE EDUCATIONAL SYSTEM OF WASHINGTON

COUNTY, MARYLAND? GENERALLY, IT HAS CAUSED A MAJOR CHANGE IN THE COUNTY'S CURRICULUM PATTERNS. BACK IN THE EARLY DAYS OF THE SYSTEM, SCIENCE WAS INTRODUCED WHERE SCIENCE HAD NOT BEEN TAUGHT PREVIOUSLY. PHYSICS, BIOLOGY AND CHEMISTRY ARE NOW REGULAR PARTS OF THE CURRICULAR OFFERINGS IN WASHINGTON COUNTY. IN ADDITION, REGULAR INSTRUCTION FOR ELEMENTARY SCHOOL STUDENTS IN ART, MUSIC, FOREIGN LANGUAGE AND FOR SECONDARY SCHOOL STUDENTS IN FOREIGN LANGUAGE AND ADVANCED MATHEMATICS ARE NOW PROVIDED. THESE WERE NOT POSSIBLE BEFORE TELEVISION WAS INTRODUCED.

VI CONCLUSION

IT IS DIFFICULT TO ASSESS THE TOTAL IMPACT OF EDUCATIONAL TELEVISION ON AMERICAN EDUCATION. WE DO KNOW - AND YOU CAN SEE FROM THIS BRIEF REVIEW TODAY - THAT ITS EFFECTS HAVE BEEN SIGNIFICANT. CERTAINLY, THE INTRODUCTION OF THIS POWERFUL MEDIUM OF COMMUNICATION INTO AMERICAN EDUCATION HAS CAUSED US TO REEXAMINE THE CURRICULUM OF FORMAL EDUCATION AT THE ELEMENTARY, THE SECONDARY AND THE POST-SECONDARY LEVEL. WE HAVE PROGRAMMED TELEVISION FOR CHILDREN BEFORE THEY REACH SCHOOL AGE. MAJOR CHANGES IN OUR CURRICULA HAVE OCCURRED AS A RESULT

WE ARE ABLE TO BRING THE WORLD INTO THE CLASSROOM AND GENERALLY RELATE THE CLASSROOM TO THE WORLD AROUND US THROUGH THE USE OF THE TELEVISION MEDIUM. WHILE TELEVISION HAS PROVIDED SOME DIFFICULTIES IN ITS USE FOR THE TEACHING PROFESSION, ITS NET EFFECTS HAVE BEEN BENEFICIAL, FOR IT HAS ENHANCED THE ABILITY OF TEACHERS TO MANAGE THE LEARNING EXPERIENCES OF OUR YOUNG PEOPLE. WHATEVER THE FUTURE BRINGS, I AM SURE IT WILL INCLUDE THE CONTINUED USE OF TELEVISION IN AMERICAN EDUCATION.

BIBLIOGRAPHY

A Survey of Instructional Closed-Circuit Television, Washington, D.C., National Education Association (Department of Audiovisual Instruction), 1967.

Broadcast Management/Engineering. "Non-Broadcast Television Proliferating and Prospering More Diversified Programming Than On-Air Fare", November, 1977.

Brown, James W. (Ed.). Educational Media Yearbook. New York: Bowker, 1978.

Carlisle, Robert. Patterns of Performance: Public Broadcasting and Education 1974-1976. Washington, D.C.: Corporation for Public Broadcasting, 1978.

Curtis, John A. and Alan R. Blatecky. Educational and Industrial Television. "The Economics of ITFS Use", April 1978.

Dirr, Peter J. and Ronald J. Pedone, Audiovisual Instruction. "A National Report on the Use of Instructional Television", Washington, D.C.: Association for Educational Communications and Technology, January, 1978.

Goldberg, Melvin. "Technology and Mass Media Implications". Speech delivered to the American Association for Public Opinion Research, Virginia, June 1978.

Jamison, Dean T., Steven J. Klees, and Stuart J. Wells. The Costs of Educational Media. Beverly Hills: Sage Publications, 1978.

Johnson, B. Lamar (Ed.). New Directions for Instruction in the Junior College, University of California, 1965.

Learning Via Telecommunications. (AVI Book of Readings). Washington, D.C.: Association for Educational Communications and Technology, 1978.

Murphy, Judith and Ronald Gross. Learning By Television. The Georgia Press, 1966.

Schramm, Wilbur. Big Media, Little Media. Beverly Hills: Sage Publications, 1977.

Teaching By Television. Prepared as a joint publication of the Ford Foundation and the Fund for the Advancement of Education, New York, 1961.